

What is claimed is:

1. A belt possessing a belt length and comprising a belt body comprising a
cured elastomer composition; a tensile member embedded in the belt body
and comprising a yarn comprising a carbon fiber; a cord treatment
composition comprising an elastomer latex coating at least a portion of
said carbon fiber, and characterized in that:
 - a) said cord treatment composition further comprises a resorcinol-
formaldehyde reaction product; and
 - b) said cord treatment composition possesses an elastic modulus at a
temperature of 20°C to be within the range of from about 1.0×10^7
dynes/cm² to about 5.0×10^8 dynes/cm², and at a temperature of
100°C to be within the range of from about 5.0×10^6 dynes/cm² to
about 4.0×10^8 dynes/cm².
3. The belt of claim 1 wherein said cord possesses a tensile modulus in the
range of from about 50 to about 350 GPa.
4. The belt of claim 1 wherein said cord possesses a tensile modulus in the
range of from about 100 to about 300 GPa.
5. The belt of claim 1 wherein said cord treatment composition further comprises
from about 0.5 to about 25% by wet weight based on said cord treatment
composition of carbon black.
6. The belt of claim 1 wherein said cord possesses a filament count in the range
of from about 5000 to about 24000.
7. The belt of claim 1 wherein said cord treatment composition possesses an
elastic modulus at 100°C in the range of from about 5.0×10^6 dynes/cm² to
about 4.0×10^8 dynes/cm².
8. The belt of claim 1 wherein said cord treatment composition possesses an
elastic modulus at 20°C in the range of from about 5.0×10^7 dynes/cm² to
about 3.5×10^8 dynes/cm².
9. The belt of claim 1 wherein said cord treatment composition possesses an
elastic modulus at 100°C in the range of from about 1.0×10^7 dynes/cm² to
about 2.5×10^8 dynes/cm².

10. The belt of claim 1 wherein said cord treatment composition possesses an elastic modulus at 20°C in the range of from about 7.0×10^7 dynes/cm² to about 3.0×10^8 dynes/cm².
- 5 11. The belt of claim 1 wherein said cord treatment composition possesses an elastic modulus at 100°C in the range of from about 2.5×10^7 dynes/cm² to about 1.0×10^8 dynes/cm².
12. The belt of claim 1 further comprising belt teeth arranged along the belt length and spaced apart by a pitch.
- 10 13. The belt of claim 1 wherein said elastomer latex of said cord treatment composition is selected from:
- a. hydrogenated acrylonitrile butadiene rubber latex;
 - b. acrylonitrile butadiene rubber latex;
 - c. carboxylated hydrogenated acrylonitrile butadiene rubber latex;
 - d. carboxylated acrylonitrile butadiene rubber latex
 - 15 e. vinyl pyridine/styrene butadiene rubber latex;
 - f. carboxylated vinyl pyridine/styrene butadiene rubber latex;
 - g. styrene butadiene rubber latex;
 - h. chlorosulfonated polyethylene rubber latex;
 - i. ethylene alpha olefin rubber latex; and
 - 20 j. a combination of any of at least two of the foregoing.
14. The belt of claim 1 wherein said cord is of a construction selected from 6K-1, 3K-3, 6K-2, 12K-1, 3K-4, 3K-5, 6K-3, and 6K-4.
15. The belt of claim 1 further comprising belt teeth formed of the body and spaced apart at a pitch.
- 25 16. The belt of claim 15 wherein said tensile member comprises at least one helically spiraled cord extending in the direction of the belt length.
17. The belt of claim 15 wherein said cord is of a construction selected from 6K-1, 6K-2 and 12K-1.
18. The belt of claim 1 wherein the cord is twisted at a rate of about 80 turns per meter.
- 30 19. The belt of claim 1 wherein the cord is twisted at a rate of about 60 turns per meter.
20. A toothed belt possessing a belt length and comprising a belt body comprising a cured elastomer composition; belt teeth formed of the body and spaced

apart at a pitch; a tensile member of helically spiraled cord embedded in the belt body and comprising a yarn comprising a carbon fiber; a cord treatment composition comprising an elastomer latex coating at least a portion of said carbon fiber, and characterized in that:

- 5 a. said carbon fiber yarn possesses a tensile modulus in the range of from about 150 GPa to about 275 GPa; and
- b. said cord treatment composition possesses an elastic modulus at a temperature of 20°C to be within the range of from about 1.0×10^7 dynes/cm² to about 5.0×10^8 dynes/cm², and at a temperature of 100°C
10 to be within the range of from about 5.0×10^6 dynes/cm² to about 4.0×10^8 dynes/cm².
- c. said cord possesses a twist at a rate selected from about 60 turns per meter and about 80 turns per meter.

21. The belt of claim 20 wherein said carbon fiber yarn possesses a filament
15 count in the range of from about 1000 to about 24000; and said cord possesses a filament count in the range of from about 5000 to about 24000.

22. The belt of claim 20 wherein said cord treatment further comprises a resorcinol formaldehyde reaction product.

23. The belt of claim 20 wherein said cord is of a construction selected from 6K-1,
20 6K-2 and 12K-1.